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AUTHOR Cabrera, Eulalia; And Others
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ABSTRACT

The Bilingual Education and Career Awareness Program at Adlai E. Stevenson High School in the Bronx was awarded a 1-year grant extension to provide services to 235 ninth- through twelfth-grade limited-English-speaking Hispanic students of varying English and Spanish proficiency. Primary program goals were to increase English and Spanish proficiency, to help students meet high school graduation requirements, and to help students develop clear, realistic vocational goals. The program provided language and content-area instruction including business education, computer literacy, bookkeeping, typing, child care, and jewelry-making. Support services included individual and group sessions for orientation, personal development, career awareness, and personal problems. On-site staff development was provided. Analysis of student achievement data indicates: (1) the program objective for English language development was met; (2) Spanish language arts objectives were greatly surpassed; (3) overall mathematics, science, social studies, and business and industrial arts achievement surpassed the passing criterion; (4) the attendance rate was significantly higher than the schoolwide rate; and (5) the student suspension rate was significantly lower than the schoolwide rate. Recommendations for improvement are given. (MSE)

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Office of Educational Assessment
New York City Board of Education
110 Livingston Street
Brooklyn, New York 11201

O.E.A. Evaluation Section Report

Robert Tobias, Administrator of Evaluation
Judith S. Torres, Senior Manager

Grant Number: G00-830-2767

ADLAI E. STEVENSON HIGH SCHOOL

Bilingual Education and Career Awareness Program

1986-1987

Prepared by the O.E.A.
Bilingual Education
Evaluation Unit

Jose J. Villegas,
Unit Manager

Eulalia Cabrera,
Principal Investigator

New York City Public Schools
Office of Educational Assessment
Richard Guttenberg, Director

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A SUMMARY OF THE REPORT

The Bilingual Education and Career Awareness (BECA) Program at Adlai E. Stevenson High School, in the Bronx, was awarded a one-year continuation of Title VII funding for 1986-87. Despite cuts in the Title VII budget, the program was able to provide the same level of instructional and support services to 235 ninth- through twelfth-grade Hispanic students of limited English proficiency (LEP) that it had provided in previous years. All program students spoke Spanish at home, and proficiencies in both English and Spanish varied.

BECA's main goals were to be: to increase students' English and Spanish proficiency; to help them meet high school graduation requirements; and to help them develop clear, realistic vocational goals.

The bilingual program was centralized under the control of the assistant principal of the foreign languages department, who supervised the project director and the teaching personnel. Title VII provided funds for administrative and support services staff. Non-Title VII personnel assigned to the program consisted of 16 classroom teachers and three educational assistants. According to the project director the organizational arrangement excluded bilingual content-area teachers from the other departments' facilities and meetings. This gave mainstream content-area teachers the erroneous impression that bilingual content-area courses differed instructionally from mainstream content areas.

As a transitional program that sought to develop Spanish- along with English-language skills, BECA offered 19 English as a second language (E.S.L.) classes, 18 Spanish-language courses, and four courses in Hispanic culture, literature, writing, and Spanish history.

The E.S.L. curriculum consisted of full-year elementary-, intermediate-, and advanced-level courses and a one-semester transitional course. The program also offered full-year elementary-, intermediate-, and advanced-level courses in English reading. The Spanish language arts curriculum offered three full-year levels of Spanish for native speakers and four one-semester enrichment courses for advanced students. Business education and vocational courses contained both project and mainstream students and included computer literacy, recordkeeping, typing, introduction to child care, and jewelry making. The typing class, which was served by a bilingual paraprofessional and a monolingual teacher, included LEP and mainstream students in order to meet the minimum class-size requirement of 28 students.

Support services consisted of individual and group sessions on school orientation, personal development, career awareness, and personal problems. On-site staff development activities

included two in-service workshops. Although parents were members of a project advisory committee and participated in some activities with students and staff, parental involvement was not among the program's successful components.

The resource teacher was developing an introduction to an occupational skills course to help fulfill the required three-year sequence in business education.

Program objectives were assessed in English language development (Criterion Referenced English Syntax Test [CREST]); growth in the native language (teacher-made tests); mathematics, science, social studies, and vocational and industrial arts classes (teacher-made tests); and attendance and suspension rates (school and program records). Quantitative analysis of student achievement data indicates that:

- The program objective for performance on the CREST was achieved at all test levels both semesters;
- Students' passing rates in native language arts courses were 91 percent in the fall and 100 percent in the spring, thus surpassing the 70 percent passing criterion.
- Overall, students' passing rates in mathematics, science, social studies, and business and industrial arts courses surpassed the 70 percent passing criterion.
- The attendance rate of program students was significantly higher than the schoolwide rate, thus meeting the proposed objective.
- The suspension rate of program students was significantly lower than the schoolwide rate, thus meeting the proposed objective.

The following recommendations are made by the evaluation team:

- Try to recruit a minimum of 28 program students for typing classes in order to avoid mixing mainstream and program students to meet mandated minimum class-size requirements.
- If funding permits, a family assistant might be hired to improve attendance rates of chronically truant students by visiting homes and providing counseling, and to foster greater parental involvement by maintaining contacts with parents and encouraging their attendance at school functions.

ACKNOWLEDGEMENTS

The production of this report, as of all Office of Educational Assessment Bilingual Education Evaluation Unit reports, is the result of a cooperative effort of regular staff and consultants. In addition to those whose names appear on the cover, Arthur Lopatin has edited the manuscripts. Margaret Scorza has reviewed and corrected reports, and has coordinated the editing and production process. Shelley Fischer and Martin Kohli have spent many hours, creating, correcting, and maintaining data files. Maria Grazia Asselle, Rosalyn Alvarez, Donna Plotkin, and Milton Vickerman have interpreted student achievement and integrated their findings into reports. Finally, Betty Morales has worked intensively to produce, duplicate, and disseminate the completed documents. Without their able and faithful participation, the unit could not have handled such a large volume of work and still have produced quality evaluation reports.

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BILINGUAL EDUCATION AND CAREER AWARENESS PROGRAM

AT

ADLAI E. STEVENSON HIGH SCHOOL

Location:	1980 Lafayette Avenue Bronx, New York 10473
Year of Operation:	1986-1987
Languages of Instruction:	English and Spanish
Number of Participants:	235
Principal:	Michael J. Weber
Project Supervisor/Assistant Principal, Foreign Languages Department:	Irving Pfeffer
Project Director:	Maria Soto

I. OVERVIEW

The Bilingual Education and Career Awareness (BECA) Program is the fourth Title VII-funded bilingual project Adlai E. Stevenson High School has sponsored since its opening in 1970. Since its inception in 1983, BECA has had three project directors. During this time it broadened its activities to include curriculum development and the use of bilingual paraprofessionals in career education courses.

BECA served 235 Spanish-speaking students of limited English proficiency (LEP) during the year under review. Its main goals were: to increase students' English- and Spanish-language proficiency; to develop career awareness and foster appropriate vocational goals; and to help students meet the requirements for high school graduation.

One of the largest high schools in the city, Adlai E.

Stevenson is located in a lower middle-class residential neighborhood in the Bronx, between the Castle Hill and Soundview sections. The school is surrounded by one- and two-family, privately owned homes. Several middle-income cooperative high-rise apartment buildings and a low-income public housing project are nearby.

Since it opened, Stevenson has been a zoned school, drawing the bulk of its students from the Soundview and Hunts Point sections of the South Bronx, which are among the city's most impover-ished neighborhoods. Stevenson was designated an educational option school for the performing arts in 1985, enabling out-of-zone students interested in these subjects to enroll in Stevenson.

The school has an enrollment of 4,379, giving it a utilization rate of 170 percent. Stevenson's Hispanic enrollment is 2,547, or 58 pe.cent of total enrollment. Of the Hispanic enrollment, 289, or 11 percent are classified as LEP.

During the year under review, BECA's instructional component consisted of: four beginning, three intermediate, two advanced, and two transitional E.S.L. classes; eight reading, four bilingual science classes, four bilingual world history classes; one bilingual American studies class; one bilingual economics class; five bilingual mathematics classes; and Spanish-language classes in Caribbean studies, Puerto Rican studies, creative writing, and advanced Spanish literature. The latter four classes were electives and used program-developed curricula.

BECA's original occupational education component consisted of industrial arts/technology, i.e., metalworking, woodworking, mechanics, printing, and home economics. But because all these courses could not be offered bilingually, this year it was decided to change BECA's occupational education component to business. The program provided bilingual classes in record-keeping, typing, and computer literacy. Although they were not business related, classes in child care and jewelry making were also provided.

As a means of providing the "unit sequences," i.e., areas of concentration, required for graduation BECA recommended that project students take one three-unit (or three-year) sequence in business and another in Spanish. All instruction followed New York State Department of Education and New York City Board of Education guidelines.

II. PROGRAM STRUCTURE AND STAFF CHARACTERISTICS

Stevenson's bilingual program was centralized under the control of the assistant principal of the foreign languages department. He supervised BECA's project director, who in turn supervised Title VII staff that consisted of a curriculum/ resource teacher-translator, a bilingual guidance counselor, a paraprofessional, and a secretary; he also directly supervised non-title VII staff consisting of 16 E.S.L., N.L.A., and content-area teachers, as well as three educational assistants.

Nine of the 16 teachers assigned to the bilingual program held master's degrees. Their teaching experience ranged from three to 29 years. Three teachers (E.S.L., math, and science) were unlicensed in their instructional area. (The bilingual math teacher held a bachelor's degree in Spanish and was not licensed in mathematics; the science teacher was highly experienced in her subject area but needed an extra bilingual course to qualify for a bilingual license.) The bilingual paraprofessionals were also experienced and were pursuing degrees in education. (See Appendix A for the characteristics of the staff serving program students.)

According to BECA's director, since the bilingual content-area teachers worked out of the foreign languages department they were excluded from the other departments' facilities and meetings. This gave mainstream content-area teachers the erroneous impression that bilingual content areas differed instructionally from their mainstream counterparts.

The bilingual resource teacher was in the process of adapting and translating an introductory occupational skills course, which will be part of the required business-education sequence. Because a great deal of his time was spent in translating school documents (e.g., classroom organization forms, curricula, permissions for trips) and preparing standardized test materials and student evaluation forms, he did not have time to perform additional curriculum development tasks.

The project director was too overburdened to undertake curriculum development work because, together with the guidance counselor and resource teacher, she spent a great deal of time on the paperwork and other tasks that were to have been the responsibilities of an assistant director and office aide -- positions that were proposed but never funded. It appears that the project needs additional administrative personnel if the bilingual resource teacher and project director are to have time to do all the curriculum development work that is needed.

The program director's responsibilities consisted of fiscal management and policy implementation. Although she had no real supervisory authority over classroom teachers, she developed a good working relationship with the staff by holding problem-solving meetings.

A new principal was assigned to Stevenson during the year under review. In an interview with a member of the evaluation team he expressed satisfaction with the work of the project

director and the program staff. He especially praised the workshops conducted by the project director for members of the mainstream staff on meeting the needs of LEP students and her presentations on the bilingual program to parent association meetings. According to the principal, the major achievements of the bilingual program were: to enable students to acquire content-area knowledge in the native language while they developed competence in English; the achievement by bilingual students of an attendance rate higher than that of those in the mainstream; the development of career awareness; and the creation of a positive and warm environment in which students could develop self-respect and ethnic pride.

III. STUDENT CHARACTERISTICS

Like other students at Adlai Stevenson, most program students lived in the South Bronx and came from poor families. The program's criteria for entry were a score below the twenty-first percentile on the English version of the Language Assessment Battery (LAB),* the recommendations of the program staff, and the consent of the student and her/his parents.

During the year under review, BECA served a total of 235 Hispanic LEP students, of whom 225 were enrolled in the fall and 200 in the spring. (In other words, 190 students were enrolled both semesters; 35 were enrolled in the fall only; and 10 were enrolled in the spring only.) Data also were received for 48 students who had been enrolled in the program during the previous year but left prior to September 1986, 25 by graduating, 5 by being mainstreamed, 5 by transferring to another school, 2 by leaving the United States, and 11 by leaving for unspecified reasons. The student population was highly mobile: 50 students

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*The Language Assessment Battery (LAB) was developed by the Board of Education of the City of New York to measure the English-language proficiency of non-native speakers of English in order to determine if their level of English proficiency is sufficient to enable them to participate effectively in classes taught in English. The areas measured are listening, reading, writing, and speaking. The LAB was designed to maximize the discrimination of the test for the non-native at the 20th percentile on the norms for an English proficient sample. This is the cutoff point for eligibility for bilingual and E.S.L. instruction. The Kuder-Richardson Reliability Estimate for the total test was .97 for the high school level (Level 4). Studies have shown that the relative difficulty of items was highly similar for both native and non-native speakers, thus validating the homogeneity of the test's content.

(21 percent) left during the year under review. (See Table 1.) Sixty-four percent of these students transferred to other school and another 18 percent left the United States. Eighty-four (42 percent) students had been in the program for one year; 65 (33 percent) had in the program for two years; and 47 (24 percent) had been in the program for three years or more. Program-wide, females slightly outnumbered males in all grades (54 percent to 46 percent), except in grade twelve (42 percent to 58 percent).

In earlier years the majority of program students came from Puerto Rico. During the year under review, 39 percent came from Puerto Rico, 24 percent came from the Dominican Republic, 16 percent were born in the United States, and the remaining students were from several South and Central American countries. (See Table 2.)

The project director cited the chronic absenteeism of a small number of students as the program's most troublesome problem. Many students either lived with relatives or had recently been reunited with their parents after a long period of separation. Such students often came into conflict with their elders, which resulted in their being asked to leave home. Both the guidance counselor and the project director felt that the program needed a family assistant to make home visits to counsel students and their families. The Title VII continuation proposal for the year under review requested one, but it was refused because it had not been included in the original BECA proposal.

TABLE 1

Number of Students Leaving the Program

Reason For Leaving	Left By January 1987	Left By June 1987	Percent of Total
Mainstreamed	4	2	12.0
Transferred	14	18	64.0
Left U.S.	6	3	18.0
Graduated	1	0	2.0
Earned G.E.D.	1	0	2.0
Other Reasons	0	1	2.0
TOTAL	26	24	100.0

- Fifty students (21 percent) left the program during the academic year.
- Sixty-four percent of the students who left the program transferred to another school.

TABLE 2

Number and Percent of Program Students by Country of Birth

Region	Country of Birth	Number	Percent
Caribbean	Puerto Rico	91	38.9
	Dominican Republic	57	24.4
South America	Ecuador	20	8.5
	Colombia	4	1.7
	Argentina	3	1.3
	Peru	3	1.3
	Venezuela	1	0.4
Central America	Nicaragua	6	2.6
	Mexico	7	3.0
	El Salvador	3	1.3
	Honduras	2	0.9
	Other South and Central American Countries	2	0.9
North America	United States	35	15.9
Total		234*	100.0

*Information for one student was missing.

- Thirty-nine percent of the program students were born in Puerto Rico.
- Twenty-four percent were born in the Dominican Republic.

Table 3 presents the program students by age and grade. Of the 266 students for whom this information was available, 23 percent were in the ninth grade, 38 percent in the tenth grade, 29 percent in the eleventh grade, and 10 percent in the twelfth grade. Fifty percent of the students were overage for their grade. Grade ten had the lowest proportion of overage students (42 percent), while grade nine had the highest (60 percent).

According to the project director, the students' English-language proficiency ranged from very elementary to advanced; their ability in Spanish also varied. She added that during the year under review a large number of program students lacked basic skills, and as a result failed their classes. The project director told a member of the evaluation team she planned to request the foreign language department A.P.'s permission to hold a staff development session on this problem, because she was concerned that many teachers might believe their students' problems were peculiar to their particular subject.

Table 4 presents the students' mean years of education in the native country and in the United States by grade. The data suggest that most of the students (61 percent) had the appropriate number of years of education for their grade placement: 40 ninth graders, 54 tenth graders, 34 eleventh graders, and 11 twelfth graders had academic backgrounds commensurate with their current grade level. Students' mean years of education in the native country ranged from 7.0 for ninth graders to 8.5 for twelfth graders. Their average time in

United States schools ranged from 2.2 years for ninth graders to 3.5 years for twelfth graders.

TABLE 3

Number of Program Students by Age* and Grade

Age	Grade 9	Grade 10	Grade 11	Grade 12	Total
13	1	0	0	0	1
14	7	1	0	0	8
15	13	15	1	0	29
16	16	33	11	0	60
17	11	18	20	4	53
18	2	14	28	8	52
19	2	2	5	6	15
20	0	2	1	4	7
21	0	0	0	1	1
TOTAL	52	85	66	23	226**
Overage Students					
Number	31	36	34	11	112
Percent	59.6	42.0	51.5	47.8	49.6

Note. Numbers in bold area reflect expected age range for grade.

*Age on June 30, 1987.
**Data were missing for 9 students.

- Fifty percent of the program students were overage for their grade placement.
- Grade nine had the highest percentage (60 percent) of overage students, whereas grade ten had the lowest (42 percent).

TABLE 4

Students' Years of Education by Grade

	Total Years of Education							Years Education Native Country		Years Education United States	
Grade	<8	9	10	11	12	>12	Total	Mean	S.D.	Mean	S.D.
9	1	40	9	1	1	0	52	7.0	1.3	2.2	1.3
10	1	12	54	12	3	3	85	7.2	1.8	2.9	1.8
11	2	0	9	34	18	4	67	8.4	2.0	2.6	1.6
12	0	0	0	3	11	9	23	8.5	2.1	3.5	1.6
TOTAL	4	52	72	50	33	16	227*	7.7	1.9	2.7	1.6

*Data were missing for 8 students.

- Students' mean years of education in the native country was 7.7; their mean years of education in the United States was 2.7.

IV. FINDINGS

The evaluation findings are presented by program objectives. They include the results of student performance in courses and tests, a review of program materials and records, interviews with relevant personnel, and classroom observations.

ENGLISH LANGUAGE OBJECTIVES

-- As a result of participating in the program, students in E.S.L. 1 and E.S.L. 2 will master an average of one objective per twenty days of instruction on the beginning level of the Criterion-Referenced English Syntax Test (CREST).

-- As a result of participating in the program, students in E.S.L. 3 and E.S.L. 4 will master an average of one objective per twenty days of instruction on the intermediate level of the CREST.

-- As a result of participating in the program, students in E.S.L. 5 and E.S.L. 6 will master an average of 0.80 objectives per twenty days of instruction on the advanced level of the CREST.

Four teachers were assigned to the E.S.L. component, three of whom were licensed in E.S.L. One of these teachers also taught native language arts (N.L.A.) in the program.

The E.S.L. curriculum had two tracks: grammar and writing track, and reading. Both tracks had beginning, intermediate, and advanced levels. E.S.L. placement was made on the basis of LAB results, teacher interviews, and information from feeder junior high schools whenever available. Students from these schools were also given informal written and oral E.S.L. tests when they entered Stevenson. But according to the project director, these tests were not always accurate as placement tools, and a better

instrument was needed.

Students were mainstreamed after two to three years in the program, depending on their progress in English. The approach to mainstreaming was individualized, so a student scoring below the LAB cutoff, who otherwise demonstrated proficiency in English, was placed in at least one a mainstream class. Most mainstreamed students regularly visited the program office to keep in touch with the bilingual staff. Such students received support services on an informal basis.

According to the project director, most mainstreamed BECA students did well enough to be placed in college-bound classes. As a rule, mainstreamed BECA students received more supervision and help than other mainstream students including regular group sessions with a grade advisor and a counselor. The BECA counselor was very proud of the academic performance of mainstreamed students. She noted that a former program student was given a scholarship to attend Ithaca College.

BECA's main thrust in 1986-87 was writing, with special emphasis on the improvement of Regents Competency Test (R.C.T.) scores. According to the project director, the school as a whole was identified as needing to upgrade its performance in writing. The bilingual program stressed writing in both native language arts and English classes. Although the use of English was encouraged in the content areas, Spanish was also widely used.

Samples of the E.S.L. students' writings were edited by an E.S.L. teacher and made into a magazine -- Untold Stories -- that

was published in the spring. Students wrote stories from the point of view of objects that had been hurt by human beings.

A member of the evaluation team visited a beginning English class. Thirteen students were in attendance. The paraprofessional assigned to this class, was monitoring students taking a placement test in another classroom.

The objective of the lesson was to write and present a brief dialogue about arrangements for a trip. To develop a frame of reference the students read a short story in which the principal character had gone on a long trip abroad. The students then wrote their dialogues individually and, some were called to the chalkboard to write them out. The teacher and students then read the dialogues out loud in unison. Individual students also were called upon to read their compositions aloud. The teacher pointed out errors and corrected the written board work.

The observer was impressed with the high level of student involvement. The teacher maintained excellent discipline and all the students worked diligently. The class was a good example of the incorporation of aural, oral, and written practice within an E.S.L. framework.

Student Achievement in E.S.L.

The assessment instrument used to evaluate the objectives in this area was the Criterion Referenced English Syntax Test* (CREST). The CREST was administered at the beginning and end of each semester. A mastery score to indicate gains was computed for each student by calculating the difference between pretest and posttest. The number of months of instruction between testings was computed for each student by multiplying the number of months between testings by the student's attendance rate. The number of skills mastered per month was calculated by dividing the mean mastery by the mean number of months of instruction between testings.

Table 5 presents the test results for students who were pretested and posttested with the same level. Complete data (levels, pretest score, and posttest score) were available for 83 percent of the students in the fall and 91 percent of the students in the spring.

Examination of Table 5 reveals that students tested at all CREST levels mastered an average of one CREST objective per

*The Criterion Referenced English Syntax Test (CREST) was developed by the Board of Education of the City of New York to measure mastery of instructional objectives of the E.S.L. curricula, and thus was constructed to maximize content validity. The test contains four items per curricular objective, and mastery of an objective is achieved when three of these items are answered correctly. The test measures mastery of 25 objectives at Levels 1 and 2, and 15 objectives at Level 3. The Kuder-Richardson reliability estimates for pretest and posttest administrations of the three levels of the CREST are:

Level 1 -- pretest (.91)/posttest (.96)
Level 2 -- pretest (.94)/posttest (.95)
Level 3 -- pretest (.91)/posttest (.91).

twenty days of instruction. Thus, the proposed objectives in this area were met.

TABLE 5

Results of the Criterion Referenced English Syntax Test

Test Level	Number of Students	PRETEST Mean	PRETEST S.D.	POSTTEST Mean	POSTTEST S.D.	MASTERY Mean	MASTERY S.D.	Mean Mastery Per Month
				FALL				
1	47	9.4	6.1	14.1	6.4	4.7	3.8	1.8
2	61	11.4	6.8	15.6	5.6	4.2	2.9	1.6
3	43	8.7	3.6	11.2	3.0	2.5	1.9	1.0
TOTAL	151	10.0	5.9	14.0	5.6	3.9	3.1	1.4
				SPRING				
1	24	8.6	6.2	12.5	7.1	3.9	4.2	1.6
2	59	10.4	6.0	14.2	5.6	3.8	2.6	1.4
3	52	9.2	3.4	11.4	3.1	2.2	1.4	1.0
TOTAL	135	9.6	5.2	12.8	5.3	3.2	2.7	1.2

- The program objective of achieving one CREST skill per twenty days of instruction, was achieved both semesters at all test levels.

NATIVE LANGUAGE OBJECTIVE

-- As a result of participating in the program, at least 70 percent of the students will score at or above the 65 percent criterion in native language arts classes.

The program's Spanish curriculum included four one-year levels of Spanish grammar, writing, and reading, plus enrichment courses in Caribbean studies, Puerto Rican history and literature, creative writing, and advanced placement Spanish literature. All were taught in both fall and spring. (See Appendix B.)

A member of the evaluation team observed a Caribbean studies class. It was conducted mostly in Spanish, with English used occasionally to clarify points, as some of the students in attendance were mainstream students. All the students had their textbooks opened to the assigned reading.

The aim of the lesson was to read a short story about an attempt on the life of an old woman who was reputed to be a witch. The story took place in the Venezuelan countryside and was part of a study unit on this country.

The students took turns reading sections of the story aloud. The teacher identified and defined vocabulary words. The story was full of idiomatic expressions and flowery, turn of the century, language. Many of the words were too difficult for the students to pronounce. Although the teacher strove to explain the story and provide definitions for the more difficult words, the assignment was evidently too advanced for some students who complained often of not understanding the material.

A text that was more contemporary and attuned to the reading level and experience of the students might be more appropriate for this class. Nevertheless, the class paid close attention to the teacher's explanation.

Student Achievement in Native Language Arts

Teacher-made tests were used to assess student achievement in this area. The program objective, that 70 percent of the students would score above 65 percent on these exams, was achieved: students' overall passing rates were 91 percent in the fall and 100 percent in the spring. The passing rate for the year was 95 percent.

CONTENT-AREA OBJECTIVE

-- At least 70 percent of the students will score at or above the 65 percent passing criterion in social studies, science, and math.

Program students received bilingual instruction in math, science, and social studies. All courses fulfilled New York City Board of Education graduation requirements, and curricula and class content paralleled equivalent mainstream courses. Textbooks were in Spanish.

The program had two licensed bilingual social studies teachers, one licensed bilingual science teacher, and a bilingual mathematics teacher who had a B.A. degree in Spanish. (Appendix A lists staff characteristics and appendix C lists content-area courses offered during the fall semester.)

A member of the evaluation team visited classes in sequential math, physical science, global history, civics, and health.

The sequential math class was the second semester of a beginning-level course. Twenty-one students attended. The aim of the lesson was how to solve verbal problems involving percentages. The class discussion was conducted in Spanish.

After reviewing how to compute percentages, the teacher wrote several verbal problems in English on the chalkboard. She then went over each one step by step. Afterward, she distributed a worksheet containing several problems. While most of the students worked the problems out at their desks, a number of students worked them out at the chalkboard. Meanwhile, the

teacher walked from desk to desk helping students. Students whose answers disagreed with those on the board asked for clarification; the teacher then reviewed and corrected the problems on the chalkboard.

Despite all this activity, the teacher was able to maintain good control over the class. The students participated eagerly and seemed very comfortable in asking questions. The teacher was open to the students' queries and summarized the material often.

The physical science class had 29 ninth graders in attendance out of a roster of 32. The class was conducted entirely in Spanish. The aim of the lesson was to define an atom. After explaining the composition of the atom clearly and in great detail, then teacher went on to discuss the periodic table of the elements. She made frequent verbal summaries and wrote notes on the chalkboard based on these summaries. She also asked many questions, which most students were able to answer readily. Discipline in this class was excellent. The students were very attentive to the lecture and asked insightful questions.

The global history class, also conducted in Spanish, had 14 students in attendance. The aim of the class was to discuss the historical context in which the Old Testament was written. After a "do now" exercise, which consisted of answering two questions related to the day's topic, the teacher proceeded to delineate the Hebrews' genealogy. She gave brief descriptions of the personages who founded the tribes of Israel. Then she began

reading a selection from the textbook, which she then asked volunteers to continue reading. Overall, the lesson succeeded in presenting the Bible as a vivid historical document. The students appeared fascinated with the topic and frequently asked questions. The teacher worked hard at encouraging the students to participate. The only problem in this class was that the chalkboard was too small, causing the teacher's notes to be crowded and a bit difficult to read.

Twenty-five students were present in the civics class. The class was engaged in a review of the Bill of Rights. Although the teacher used Spanish most of the time, English translations for important terms were presented. The class was conducted as an open discussion, with students participating freely in assessing the importance of each amendment. The teacher tried to steer away from controversy and preferred to keep the discussion at an abstract level. However, some students insisted on debating with each other on specific injustices committed against members of minority groups. Although this created a somewhat disorganized atmosphere, the students demonstrated an ability to think critically and to express their points of view with remarkable force.

The health class had 17 students in attendance. The lesson objective observed centered around the stages of growth of a fertilized ovum. Spanish was used exclusively. Homework and discussion questions were written on the chalkboard. The teacher presented a chart which depicted the fetus, ovaries, and other

female reproductive organs. She then explained the stages of the embryo and the fetus. The teacher also explained menstruation and its role in the reproductive cycle. The students followed the teacher's explanations closely and asked relevant questions. The maturity shown by the young men and women was impressive. The teacher's ability to lead the class and answer questions in a straightforward manner contributed greatly to the prevailing atmosphere of seriousness and decorum.

Student Achievement in Content-Area Courses

Table 6 presents the passing rates of students in mathematics, science, and social studies courses each semester. A weighted average for the year also was computed.

Examination of Table 6 reveals that the program objective, that 70 percent of the students would achieve a passing rate of 65 percent, was surpassed. Overall, 80 percent of the students passed their content-area courses. In the fall, the objective was met by students in social studies only; in the spring, the objective was met in all three subject areas.

TABLE 6

Passing Rates in Content-Area Courses

Course	FALL		SPRING		TOTAL
	Number of Students	Percent Passing	Number of Students	Percent Passing	Overall Passing Rate
Math	137	58.4	81	100.0	73.9
Science	124	68.5	85	100.0	81.3
Social Studies	174	74.1	120	100.0	84.7
Total		67.5		100.0	80.4

- Overall, students surpassed the objective: 80 percent of the students achieved a passing rate of 65 percent.
- The program objective was achieved in the fall in social studies, and in all three subject areas in the spring.
- The highest passing grade (100 percent) was met by students in all subject areas during the spring. The lowest passing rate (58.4 percent) was achieved in the fall in math.

CAREER OBJECTIVES

-- As a result of program participation, at least 70 percent of the students will score at or above the 65 percent criterion in bilingual industrial arts classes.

-- As a result of program participation, at least 70 percent of the students will score at or above the 65 percent criterion in business education classes.

BECA offered more business education classes and fewer industrial arts classes in 1986-87. In addition to coursework, BECA students participated in career-awareness seminars conducted by the bilingual guidance counselor.

During the year under review, BECA students were offered bilingual computer literacy, bilingual recordkeeping, and typing. The computer literacy course served as an introduction to computer terminology, word processing, and data base. To supplement this course BECA also offered an after-school computer program which provided help with homework and computer practice-time. Bilingual recordkeeping provided instruction on how to keep records on standard business forms. BECA's career component provided two additional courses: introduction to jewelry making and introduction to child care. The jewelry class taught elementary metal-working skills; the child-care course provided a "hands-on," practical approach to child development and child rearing.

A member of the evaluation team observed a computer literacy class. The aim of the class was to learn how to use the "go to" command to form a "loop," which is a repeat of the same operation to change one or more variables. The language of instruction

was Spanish; English was used whenever computer terms could not be translated into Spanish. The teacher offered an introduction to the "hands-on" work, went over key concepts, identified and defined English terms, and wrote the necessary commands on the chalkboard. Because the class was taught in Spanish the students were able to follow the lesson easily. The teacher was knowledgeable and gave clear and concise directions.

A typing class containing 40 percent mainstream students was also observed. The teacher, who was licensed in E.S.L., used an E.S.L. approach. He asked students to provide words beginning with various consonants and then had the class repeat and type out each word. A paraprofessional moved from desk to desk helping students.

Interviewed after class, the teacher said he was frustrated with having to teach a mixed class because grouping mainstream with program students meant that both groups were being short-changed.

Asked about this situation, the project director said that both this class and the recordkeeping were funded by municipal tax-levy funds, which necessitated a minimum enrollment of 28 students per class. Since an insufficient number of program students had enrolled in either class, both had to be opened to mainstream students.

Student Achievement in Industrial Arts/Business Education Courses

Table 7 presents the passing rates for program students in industrial arts and business education courses each semester.

Examination of the table reveals that the proposed objectives in this area were surpassed. Students' overall passing rates were 90 percent in business courses and 86 percent in industrial arts courses.

TABLE 7

Passing Rates for Program Students in Bilingual Business and Industrial Arts Classes

Course	Number of Students	Percent Passing	Number of Students	Percent Passing	Overall Passing Rate
Business	54	77.7	76	98.8	90.0
Industrial Arts	37	83.7	7	100.0	86.3
TOTAL		80.1		98.9	89.0

- Students surpassed the objective that 70 percent of the students would achieve a 65 percent passing grade in both business and industrial arts.
- The highest passing rate (100 percent) was achieved by students in industrial arts during the spring. The lowest passing rate (77.7 percent) was achieved by students in business in the fall.

NON-INSTRUCTIONAL OBJECTIVES

Programming

-- All program students will meet with the bilingual guidance counselor in order to plan their school program.

This objective was achieved. After meeting with each student, the bilingual guidance counselor designed an individualized program based on an analysis of the student's records and teacher recommendations.

Partial mainstreaming was begun whenever a student demonstrated the capacity to succeed in mainstream classes. At first, students were programmed for only one mainstream course, which was determined by the student's program and the courses available. If the student passed the initial mainstream course, additional ones were added one at a time. Students were fully mainstreamed when they reached the twenty-first percentile on the LAB and were reported to have no language problems in the mainstream classes in which they were enrolled.

Supportive Services

-- Fifty percent of program students will participate in group counseling sessions.

Title VII support services were reserved for LEP students who recently had immigrated to the United States. Counseling was provided by the bilingual guidance counselor to both groups and individuals. The counselor met with students at least six times per semester. According to the project director, program students received more attention in this area than did those in

the mainstream because the bilingual counselor's caseload was smaller than her mainstream counterpart's.

Group sessions had three chief goals: to orient new students to the school milieu; to develop students' sense of self-worth; and to promote an awareness of job options. New students were oriented to the program and school during the first and second group sessions held during the fall term.

The "Yo Puedo" (I Can) kit was used to help students develop a more positive self-image; to create an environment in which students feel free to talk about their personal problems; and to develop students' techniques of listening and self-expression. It included activities to develop skills in leadership, organization, self-advocacy, and planning for the future.

Students' motivation, self-esteem, and pride in their cultural heritage were developed through excursions to Hispanic cultural events and institutions (e.g., plays and museums). Students were encouraged to invite a mainstream friend on these field trips.

Career awareness was developed through the "Job-O" kit, which provides information on a range of job areas in which a student might have interest and aptitude. This information was used in conjunction with the Metro-Guide System, which provided a group of 20 questions. Answers were fed into the school computer, which was hooked up to a national system that provided a printout listing current information about jobs, aptitudes required, market demands, salaries, locations, etc.

Individual counseling included crisis intervention, problem solving, programming, discussion of academic and vocational goals, resolution of school delinquency problems, discussion of in-school and out-of-school personal difficulties, and referrals to school and outside agencies. The counselor contacted parents by phone and through the mail.

Also involved in the counseling process were the program director, other program staff members, and the school's employment counselor. Working cooperatively, they enabled the project to achieve its objective in this area.

Extracurricular Activities

-- Fifty percent of the program students will visit business and industrial plants, and cultural and educational sites.

According to program records, 290 students visited businesses and cultural and educational sites, thus meeting the objective in this area.

Affective Domain

-- As a result of participating in the program, the students' attendance will be significantly higher than the attendance of mainstream students.

-- As a result of program participation, the percentage of program students who are suspended will be significantly lower than the percentage of non-program students who are suspended.

Statistical significance of the difference between program and school rates was determined through the application of a z-

test for the significance of a proportion.* This procedure tests whether the difference between one proportion (the program's rate) and a standard proportion (the school's rate) is greater than can be expected from chance variation.

Data reveal that the attendance objective was achieved. The attendance rate of program students (85.3 percent) was significantly higher (z = 4.0) that the attendance of the school as a whole (73.0).

The suspension rate of program students (0.9 percent) was significantly lower (z = 2.41) than the suspension rate of the school (4.0 percent) as a whole, thus meeting the program objective.

Staff Development

-- Program staff will take at least twenty university credits in E.S.L./Bilingual Education or twenty credits related to their area of teaching.

In 1986-87 four faculty members took a total of 18 university credits. All the courses were to meet teacher certification requirements. Three of the credits were in bilingual education. The program director attended five conferences, workshops, and outside meetings. Faculty members attended two in-service training workshops.

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*Bruning, J.L. and Kintz, B.L. Computational Handbook of Statistics, (Glenview, Illinois: Scott, Foresman and Company, 1968).

Parental Involvement

-- The Bilingual Parent Advisory Council will hold at least four meetings during the 1986-87 school year.

As reported by the project director, the BECA program held two parental involvement activities in 1986-87. At one meeting program administrators explained the bilingual program's goals and objectives, at the other they explained the mainstreaming process. According to the project director, 150 parents met with her and the guidance counselor to discuss individual student's problems. As reported last year, parental involvement continues to be a weak component of the program.

V. CONCLUSIONS AND RECOMMENDATIONS

The BECA program met all of its instructional objectives -- E.S.L., native language arts, content-area subjects, business, and career education. It also met its objectives in the areas of programming, supportive services, extracurricular activities, attendance, and suspensions. It was evident that staff members were dedicated and interested in the educational progress and welfare of their students. The project director was well aware of the needs of the program and did not hesitate to make changes whenever necessary. She strove to maintain a cooperative, team-like approach to fulfilling the program's responsibilities. The guidance counselor was effective in providing students with personal, academic, and career advisement. The program also enjoyed the support of the principal, who believed BECA contributed significantly to the school's favorable reputation in the community.

The following recommendations are offered to improve the program:

1. As recommended in last year's report, if resources permit, a family assistant should be hired to improve the attendance rate of chronically truant students through home visits, family counseling, and appropriate follow-ups. A family assistant would also increase parental involvement by visiting parents and encouraging them to attend school activities.

2. To avoid the instructional problems caused by mixing mainstream with program students, a more intense effort should be

made to bring the number of program students enrolling in business technology classes up to 28.

VI. APPENDICES

APPENDIX A

Staff Characteristics: Professional and Paraprofessional Staffs

Title/Function	Percent Time in Each Function	Education (Degrees)	Is person licensed or certified for this title/function? (Y/N/NA)	Total Yrs. Experience Education	Years Relevant Experience Bilingual/E.S.L./ Foreign Language
Supervisor	.2 .4	B.A., M.A., Ctf. A. & S.	y	26	ESL 5/FL 26
Project Director	1.0	B.A., M.A.	y	15	15 Bil Math
Bilingual (SPAN)Guidance Counselor	1.0	B.A. - Spanish M.S. - Guidance	y	13	ESL (Para) 6 Span. (Teacher & Bil. Guidance 3
NLA Resource Teacher/Curriculum	.4 .6	M.A. - Spanish B.A. - Spanish	y	5	Span. (Teacher) 5
Secretary	1.0	30 CRS	y	5	Bil 5
ESL	1.0	M.S. - Education M.A. - Bil. Ed.	y	16	Spec. Ed. 5/ESL 10/FL 1
ESL	1.0	B.A. - ESL	y TPD	7	ESL 3/Adult Ed. GED 4
ESL ESL (Reading)	.4 .6	B.A. - Spanish M.A. - Spanish	n	10	ESL 7/FL 10
NLA (Spanish)	.8	B.A. - Spanish	y	4	Spanish 3/ESL 2
ESL (Reading)	.2	B.A. - Spanish M.A.	y	21	ESL 9/FL 21

Title/Function	Percent Time in Each Function	Education (Degrees)	Is person licensed or certified for this title/function? (Y/N/NA)	Total Yrs. Experience Education	Years Relevant Experience Bilingual/E.S.L./ Foreign Language
NLA (Spanish)	1.0	B.A. - Spanish-Ph.D.-Humanities M.A. - Spanish (Cuba)	y	24	ESL 9/FL 21
NLA (Spanish)	1.0	B.A. - Spanish	y	9	Bil 2/ESL 2/FL 7
NLA (Spanish)	1.0	B.A. - Education M.S. - Bil. Education	y	26	Bil 17/ESL 25/FL 19
Bilingual (Computers)	.4				
NLA (Spanish)	.4	B.A. - Spanish	y	31	Bil 3/FL 2
Bil. Gen. Scie., Life Scie., Hygiene	.4/.4/.2	B.A. - Science		P.R. 13	
Bil. (Span) Bio. & Gen. Scie.		M.S. - Science	y TPD	N.Y. 4	Bil 18
Bil. (Span) Math	1.0	B.A. - Spanish	n TPD	3	Bil 3
Bil. (Span) Social Studies	.4	B.S. - Political Science M.B.A.	y	11	Bil SS 11
Bil. (Span) Social Studies	1.0	B.A. - Spanish	y TPD	4	Bil 4
Bil. (Span) Recordkeeping	.2	B.A. - Education M.A. - ESL	y	20	Bil 6/ESL 3
ESL	.6				
ESL (Reading)	.4	B.S.	y	5	Bil 4
Bil. (Span) Jewelry	.2	B.S.	y	20	Bil 2
Bil. (Span) Clothing	.2	Master-Home Economics	y	19	Bil 2
ESL PARA	1.0	24 CRS	n/a	3	Bil 2/ESL 3
ESL (SPAN) PARA	1.0	12 CRS	n/a	13	Bil 8/ESL 5
ESL PARA	1.0	132 CRS	n/a	7	ESL 2/1

APPENDIX B

Instruction in the Native Language(s) (Fall)

Course Title & Level	No. of Classes	No. Taught Out of License	No. of Classes with Para.	Total Register	Title VII Register	Periods Per Day	Course Description	Curric.*	Texts/Materials in Use
Spanish 1 Level I	5	0	0	154		1	Grammar, reading & writing for native speakers	N.Y.C.	Standard texts
Spanish 3 Level II	6	0	0	181		1	" "	N.Y.C.	"
Spanish 5 Level III	5	0	0	164		1	" "	N.Y.C.	"
Spanish 6 Level III	2	0	0	59		1	" "	N.Y.C.	"
Caribbean Studies	2	0	0	56		1	Literature & geography of Caribbean	P	"
Puerto Rican Hist. & Lit.	1	0	0	27		1	History & culture of P.R.	P	"
Creative Writing	1	0	0	30		1	Writing Journalism	P	"
AP Spanish Lit.	1	0	0	24		1	History & Literature of Spain	P	"

*Curriculum codes: C = NYC Curriculum T = Textbook Curriculum O = Other Curriculum
S = NYS Curriculum P = Program-developed Curriculum

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APPENDIX C

Bilingual Instruction in Subject Areas (Fall Semester)

Course Title & Level	No. of Classes	No. Taught Out of License	No. of Classes with Para.	Total Register	Title VII Register	Percent of Eng. Used	Course Description	Curric.*	Texts/Materials in Use
Life Science Term I	2	0	0	59			Related to study of animals, plants & environment	N.Y.C.	App. text in Spanish Visual aids
Intro. to Physical	2	0	0	50			General Science	N.Y.C.	" "
Health	1	0	0	25			Topics related to health sci. family plan. & alcohol drug abuse	N.Y.C.	" "
Global History Term 1	2	0	0	57			World History	N.Y.C.	" "
Global History Term 3	2	0	0	55			World History	N.Y.C.	" "
American Studies Term 1	1	0	0	31			American History	N.Y.C.	" "
Bilingual Economics	2	0	0	47			Economics	N.Y.C.	" "
Fundamental Math I	1	1	1	30			General Mathematics	N.Y.C.	" "
Fundamental Math II	1	1	0	24			General Mathematics	N.Y.C.	
Seq. Math Term I	2	2	0	63			9th Year Mathematics	N.Y.C.	
Bil. Math Skills	1	1	1	17			Individualized Math Skill Prg	P	

*Curriculum codes: C = NYC Curriculum T = Textbook Curriculum O = Other Curriculum
S = NYS Curriculum P = Program-developed Curriculum